

THIS FILE CONTAINS PLANNED CHANGES TO THE MATERIALS MANUAL THAT ARE CURRENTLY IN THE DRAFT STAGE. THE CHANGES MAY OR MAY NOT HAVE BEEN APPROVED OR MAY BE SUBSEQUENTLY REVISED.

THE FOLLOWING INFORMATION REPRESENTS ISSUES THAT SHOULD BE CONSIDERED FOR MATERIALS PHASE REPORTS AND DURING PROJECT DEVELOPMENT.

PLEASE CONTACT CENTRAL MATERIALS IF THERE ARE ANY QUESTIONS.

Delete the text of this page and substitute the following:

The State Design Standards cover federally funded projects not on the NHS (?). Minimum design standards for state funded projects not on the NHS are not identified for use on a statewide basis. Appropriate design standards for state funded projects not on the NHS are as determined by the District or on a project specific basis.

The requirements for submittal and approval of Materials Phase Reports are as follows:

Approved Materials Phase Reports are required for all federally funded projects including those not on the NHS.

State funded projects which are on the NHS require the same level of standards, design, and review as federally funded projects. Approved Materials Phase Reports are required for these projects.

The State Design Standard for non NHS routes is a 20 year design life for reconstruction and 10 years for rehabilitation. State funded minor rehabilitation projects not on the NHS do not necessitate HQ concurrence.

All Materials Phase Reports and investigations will be conducted to the appropriate level of detail for the specific project regardless of who has approval authority.

Approval authority for Materials Phase Reports is summarized in [Table 200.01.1](#).

TABLE 200.01.1  
PHASE REPORT APPROVAL AUTHORITY

Simple and Complex projects are defined in [Section 315 of the Design Manual](#).

<u>Funding / Route</u>	<b>Federal Funding on NHS</b>	<b>Federal Funding on Non-NHS</b>	<b>State Funding on NHS</b>	<b>State Funding Non-NHS</b>
<b>SIMPLE</b>				
<b>Rehabilitation/Restoration</b>	HQ	HQ	District	District
<b>Overlay</b>	HQ	HQ	District	District
<b>CRABS</b>	HQ	HQ	District	District
<b>Turn Bays</b>	District	District	District	District
<b>Traffic Signals and Signs</b>	District *	District *	District *	District *
<b>Minor Intersection Improvements</b>	District	District	District	District
<b>Minor Widening</b>	District	District	District	District
<b>Minor Bridge Replacement</b>	HQ	HQ	District*	District *
<b>COMPLEX</b>				
<b>New Routes</b>	HQ	HQ	HQ	District *
<b>New Alignments</b>	HQ	HQ	HQ	District *
<b>Reconstruction</b>	HQ	HQ	HQ	District *
<b>Enhancement</b>	District *	District *	District *	District *

\* HQ approved Phase IV report may be required

Elimination of Phase Reports for projects on the NHS shall require a waiver approved by HQ.

In section 240.01 Pavement Type and Surface Smoothness, delete the first two paragraphs after the bullets and substitute the following.

In addition to opportunities to improve ride and pre-paving IRI; location, setting (urban or rural), utilities, cross streets, grade control and any other aspect of the project that may impact the Contractor's ability to achieve ride should be considered. Consideration should also be given to increasing pavement depth to allow for additional opportunities to achieve a smoother ride.

Projects not meeting the above pre-paving ride guidelines may be designated as Schedule 3 projects. New construction, projects should be considered Schedule I projects regardless of pre-paving IRI, unless location indicates otherwise. Crabs or full depth reclamation projects with a single lift should be considered Schedule II projects regardless of pre-paving IRI.

If no Schedule is specified, pavement will the specification will default to Schedule II.

In section 240.05 Paving, add the following.

For concrete paving projects, refer to 520.02.03 and 520.02.04 regarding joint and reinforcement design. The procedures referenced therein are resources for developing joint and reinforcement plans. A concept jointing and reinforcement plan should be included in the project plans to clarify the appropriate jointing and reinforcement applications. The final jointing and reinforcement plans will take into consideration the contractor's operation. Describe the anticipated jointing and reinforcement applications. Also, address required curing time for use of the paved surface by roadway traffic. Include concept jointing and reinforcement plan in the Appendix.

In section 240.07 Aggregate Estimating Data, insert the following after the first paragraph.

At the option of the District, a disclaimer regarding unit weights may be included. Following is an example.

#### ESTIMATING BASIS

The unit weights in this estimating basis were determined from area history and past project experience. This information is provided to be used by the designer for developing reasonable project quantities. The actual quantities will vary dependent on contractor provided source, crushing operation, and mix designs. The Contractor is responsible for determining actual unit weights based on the material produced and providing adequate materials for the project plus any losses to stockpile operation, out of specification (rejected) materials, or other wastes.

- Examples of unit weight estimates:

**In section 270.02.05 Source Control, add the following.**

All material is to be associated with the site where the material was originally extracted from its original location.

Upon completion of each project Form ITD-964, Summary of Crushing Operations, shall be submitted to the District Materials Section for all state owned or controlled aggregate sources used for the project.

**In section 270.03 Approval to Purchase:**

Delete the phrase “Administrative Policy A-16-03” and substitute “Materials Operational Memorandum No. 12”.

**In section 435.02.04 Pavement Rehabilitation Projects, delete the text of this section and substitute the following.**

For pavement rehabilitation projects, core or drill through the existing roadway to a minimum depth of 5 feet (1.5 m), or as necessary to determine surface, base, and subbase thicknesses, and to field classify the subgrade soil along the project length. Borings should be drilled at intervals no greater than every 0.5 to 1.0 lane mile. A minimum of 10 to 12 borings is generally needed for pavement design regardless of the length of the project.

Locate 2 to 3 test holes at crack locations if practicable. Include a crack description on the test hole log as being “top down” or “bottom up” cracking. This information will aid in determining the appropriate pavement rehabilitation method.

Review available subsurface information at the District Materials Section prior to developing the subsurface investigation plan. Additional borings should be drilled at any locations on the project with a history of maintenance concerns. An approved traffic control plan and a permit to work within the right-of-way are required from the District Traffic Section.

All existing culverts shall be inspected to assess maintenance and/or replacement needs. Soil samples shall be obtained at all existing culvert locations warranting maintenance and / or replacement to assess soil corrosivity potential. Possible culvert replacement work may be done either prior to or concurrently with the pavement rehabilitation work.

In section 550.01 General (Subsurface Pavement Drainage), delete the first paragraph and substitute the following:

**550.01 General.** Interstate Highways and all other highways shall incorporate a Positive Drainage System for new or reconstructed Asphalt Concrete and Portland Cement Concrete Pavement when one of the following combinations of conditions exists:

- 1) The projected Truck ADT is greater than 1000, a bathtub section must be constructed, a storm sewer system exists or is to be constructed and subgrade consists predominantly of silt and/or clay soils. A bathtub section is defined as any section with any portion of the pavement structural ballast layers below natural subgrade or sections with less than a 1 foot ditch below subgrade.
- 2) The projected Truck ADT is greater than 1000 and the subgrade soils consist predominantly of silt and/or clays and poor subsurface drainage is evident.

A Positive Drainage System shall be considered when any of the following conditions exists:

- 1) A bathtub section must be constructed. A storm sewer system that exists or is to be constructed does not omit the need to consider drainable pavement.
- 2) Subgrade soils consist predominantly of silt and/or clays. Poor subsurface drainage does not need to be evident to allow/approve drainable pavement.
- 3) Surface and/or subsurface drainage may be inhibited (by necessity) by lack of surface drainage features (ditches, grading, etc.)

A Positive Drainage System is not required when subgrade soils consist predominantly of sand and gravel.

For pavement rehabilitation projects, drainable pavement (permeable base and edge drains) should be considered when poor drainage under the surface pavement layer is evident. (Example: CRABS, install edge drains, ATPB, then pave).

In section 550.02 Selecting Permeable Bases, add the following to the last sentence / paragraph:

When choker material is needed for rock cap, the choker material should consist of plantmix leveling course or Asphalt Treated Permeable Leveling Course (ATPLC). Use of dense graded aggregate base for choker material on rock cap is not recommended.

In section 550.03 Unstabilized Permeable Base (Rock Cap), delete the gradation for rock cap and substitute the following:

Sieve Size		% Passing
3" (75.0 mm)		100
1½" (37.5 mm)		55 - 85
¾" (19.0 mm)		10 - 35
½" (12.5 mm)		5 - 15
No. 4 (2.36 mm)		0 - 5